## ABSTRACT

[000102] Disclosed is a transgenic knockout mouse whose genome has a homozygous disruption in its endogenous *Gpx1 and* Gpx2 genes, wherein the disruptions result in a decrease in GPX activity in the transgenic mice when compared to non transgenic mice of the same type. Methods for production of the mouse are presented. Also disclosed are cells derived from the transgenic knockout mouse. The invention further provides a mouse model for the disorders of ileitis, colitis, inflammatory bowel disease, ileal cancer and myeloleukemia. The mouse can be used in a method for identifying therapeutic agents for the treatment of an individual diagnosed with one or more of said disorders.

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